TRANSPORT AVERAGING, COST ALLOCATIONS AND COST RECOVERY

The local transport equal charge rates, prior to price caps and the transport restructure, were derived from a "revenue requirement" which was the result of Commission mandated rules for the allocation of investments and expenses. This mandated cost allocation process predominantly utilized (and still does for data reported in ARMIS) general categorizing and averaging of costs to a great extent - averaging across technologies, geographical areas (e.g., rural, suburban, urban), services, and jurisdictions. The key drivers in the process were plant investments, with expenses generally following the allocation of plant. Because there were basically only two rate elements for switched local transport, the per minute termination charge and the per minute-mile facility charge, the rates could deviate very little, if at all, from the rate levels resulting from the cost allocation rules.

Special access rates, on the other hand, while adjusted to equal a total special access revenue requirement, were more heavily based on a unit investment approach which more specifically identified the actual plant used for each service. The unit investments were then used as a basis for loading appropriate overheads. In addition, under the cost allocation process, high cap facilities could be directly identified and assigned to the special access revenue requirement category.

Once rates were set under price cap rules, beginning in 1991, the direct link to revenue requirements was broken, but the price cap basket and banding limitations allowed relatively little annual deviation from original rate-of-return rate levels and rate relationships. The transport restructure was implemented at the very beginning of 1994 and was based on 1993 rates and 1992 demand. The transport restructure repriced switched transport services based on special access high cap rates. To a great extent, the TIC, which was the resulting difference in revenues between the two pricing schemes, represented the difference in costing methods between the two services - the local transport rates based predominantly on cost allocation rules that overassigned costs to local transport and the high cap rates based more on a direct identification of costs. Much of the TIC, therefore, represents the averaging of costs across technologies, geographies, and jurisdictions (state and interstate) that were inherent in the cost allocation rules that determined the equal charge rates.

A direct identification of local transport costs would result in fewer costs than those produced by cost allocation rules. For example, in the cost allocation process the first step is the combination of plant accounts which are then categorized into three general plant categories -- exchange loop, exchange trunk and interexchange trunk. These categories are then subcategorized into message and private line for jurisdictional separations purposes. Although the detail is available at the subaccount level prior to categorization, this detail is lost in the subsequent categorization and separation processes. A detailed analysis utilizing a direct cost approach demonstrates that the cost allocation rules assign more investment to local transport than are actually utilized in provision of the service. The difference in costs is currently in the TIC, even though these costs are actually incurred to provide local services, state services, and/or interstate services other than local transport.

TRANSPORT AVERAGING, COST ALLOCATIONS AND COST RECOVERY (continued)

An additional component of the TIC can also be identified. Circuit equipment and cable and wire facilities serving longer haul traffic have an embedded Part 36 cost that is many times the cost developed by using the special access costing methodology. The cost of hauling traffic to scattered local dial switches in remotely populated areas is several times more that the costs of hauling an equivalent unit of traffic in the larger cities at special access rates. This cost differential has been averaged over the rate charged to all customers as part of the TIC. Most of the longer haul traffic is carried on "interexchange" facilities as defined in the Part 36 categorization. The costs associated with this traffic are defined by the FCC's rules and are associated with the Part 69 transport element. These costs are well documented in the ARMIS process. The cost per unit of traffic using interexchange facilities is significantly higher that the cost per unit of traffic hauled over the exchange, more urban type of facilities for some companies. The cost differential per unit of traffic is also part of the TIC.

INTEREXCHANGE CABLE AND WIRE INVESTMENT

In the course of developing the basic studies of cable and wire investment, it is possible to directly identify by subcategory (Message Joint, Private Line, Interstate-Interlata, Private Line Intrastate-Interlata, Private Line Intrastate-Intralata, etc.) those costs associated with private line and message services. In this way, the cable and wire study process develops specific jurisdictional costs associated with private line services and those message services that are not multijurisdictional in nature. However, section 36.156 (a) of Part 36 of the FCC Rules dictates that the costs of Category 3 interexchange cable and wire investment will be assigned to the above subcategories based on the average cost per equivalent telephone circuit kilometer. Application of this Part 36 procedure assumes that all classes of interexchange circuits have the same cost characteristics.

Within the interexchange cable and wire investment, all categories except Message Joint are already jurisdictionally pure and could be directly assigned to categories and jurisdictions as identified in the basic study, if it were permitted by the Part 36 rules. For the Message Joint investment classification, traffic usage factors would continue to be used to determine the final jurisdictional allocation. The distribution of costs to categories and jurisdictions based on direct identification will reduce the IC by reassigning costs from interstate transport to intrastate (Common Line, Local Switching and Special).

ATTACHMENT 11

USTA
TOTAL INDUSTRY TIC ESTIMATE

USTA COMMENTS
CC DOCKET NO. 96-262
JANUARY 29, 1997

TOTAL INDUSTRY TIC ESTIMATE

COMPONENT	ESTIMATE	% OF TOTAL TIC REVENUES
TOTAL TIC REVENUES	$3,101,857,999	100.00
80% OF TANDEM REVENUE REQUIREMENT	400,977,155	12.93
CCS/STP COSTS ALLOCATED TO TANDEM SWITCHING	58,746,472	1.89
HOST/REMOTE CONFIGURATIONS	160,503,740	5.17
CENTRAL OFFICE TERMINATION	630,658,408	20.33
COE MAINTENANCE MISALLOCATIONS	101,795,512	3.28
ANALOG END OFFICE TRUNK SWITCH PORTS	138,426,630	4.46
REDEFINED TANDEM SWITCHED TRANSPORT	349,273,294	11.26
TRANSPORT AVERAGING, COST ALLOCATIONS AND COST RECOVERY	1,156,152,244	37.27
INTEREXCHANGE CABLE AND WIRE INVESTMENT	37,412,468	1.21

ATTACHMENT 12

USTA REPLYCOMMENTS CC DOCKET 94-1
AT ATTACHMENT D

"IMPLICATIONS OF TECHNOLOGY CHANGE
AND COMPETITION ON THE
LOCAL EXCHANGE CARRIERS"

ADRIAN J. POITRAS
LAWRENCE K. VANSTON
TECHNOLOGY FUTURES, INC.

USTA COMMENTS
CC DOCKET NO. 96-262
JANUARY 29, 1997

ATTACHMENT D

"Implications of Technology Change and Competition on the Local Exchange Carriers"

Adrian J. Poitras
Lawrence K. Vanston

Technology Futures, Inc.

USTA Reply Comments 3/1/96

IMPLICATIONS OF TECHNOLOGY CHANGE AND COMPETITION ON THE DEPRECIATION REQUIREMENTS OF THE LOCAL EXCHANGE CARRIERS

Adrian J. Poitras

Lawrence K. Vanston

Technology Futures, Inc.
11709 Boulder Lane
Austin, TX 78726-1808

Prepared on Behalf of the United States Telephone Association

EXECUTIVE SUMMARY

Microeconomic Consulting and Research Associates, Inc. (MiCRA) has filed in support of MCI in response to the claims of local exchange carriers regarding the continuing problems with depreciation. The conclusions of MiCRA's research are wrong, and result from improper assumptions along with a failure to understand the technology issues underlying the LEC assertions. TFI demonstrates herein that:

- LEC regulated depreciation rates and reserves are substantially below proper economic rates and reserves;
- Technology and competition pose serious cost recovery problems for LECs which must be resolved now;
- The pace of technology change and competition have caused overstatement of regulated lives for key network assets; and
- Discontinuance of FAS 71 for financial reporting is material evidence of the scope and magnitude of this problem.

As TFI shows in its review, MiCRA is erroneous in its conclusion that "complaints about allowable depreciation reserves and current expenses are unwarranted." The real evidence regarding technology change and competition leads to the opposite conclusion. The MiCRA conclusions are fundamentally flawed due to the failure to consider the impact of correct lives in the depreciation rate and reserve requirement calculations.

TFI's extensive research into forecasting key telecommunications technologies reveals a serious need to shorten lives now. Projections for new services demand show that a ubiquitous, broadband, digital network will be needed by the LECs in the 2010-2015 timeframe.

TFI's studies of LEC investments reveal that the average remaining lives of current network assets are appreciably shorter than current regulatory prescriptions. Analysis of cable TV companies reveals that their effective remaining depreciation lives average 3.6 years. A sampling of interexchange carriers and competitive access providers produces an average of 5.7 years. CAPs, IXCs and cable TV companies are rapidly entering competition with the local exchange carriers, and do not possess a large embedded copper cable network which is significantly underrecovered. In contrast, LECs regulatory prescriptions result in average remaining lives of 8.1 years.

TFI finds the ranges of lives which the FCC prescribes for LECs to be totally inadequate. Past regulatory practices have improved the status of the LECs' reserves, but current life ranges prescribed by the FCC produce serious on-going underrecovery. Because current lives imply recovery beyond 2020 (and 2030 for copper cables), a serious shortfall will continue to grow which requires expedient regulatory action. Current technologies being used for telephony services will be obsolete long before the time frames implied by FCC lives, which means existing LEC regulated investments are already severely under-depreciated. Likewise, the LECs' regulatory depreciation expense has been severely understated.

The local exchange carriers recognized these conditions during the 1993-1995 time frame by discontinuing FAS 71 regulatory accounting practices for financial reporting purposes. In doing so, they have increased their depreciation reserves by $38.9 billion, using more realistic lives for network assets based on technology and competitive factors.

MiCRA's comments provide no insight into this issue. MiCRA assumes the very answer it attempts to question by using FCC-prescribed lives to test the appropriateness of FCC-prescribed lives. With respect to the technologies involved in the provision of telephony, MiCRA is concerned only with the LEC copper distribution networks, implying that the copper-based technologies will always remain economic for the provision of telephony services. This completely ignores on-going network evolution due to technological change, market demands and competition, and incorrectly presumes that LECs should not be allowed to compete in the provision of new services using modern facilities.

1. INTRODUCTION

In this paper, Technology Futures, Inc. (TFI) addresses the comments submitted by Microeconomic Consulting & Research Associates, Inc. (MiCRA) on behalf of MCI in CC Docket 94-1, Price Cap Performance Review for Local Exchange Carriers. MiCRA's comments conclude that (1) the Regional Bell Operating Companies (RBOCs) have improperly assessed their depreciation requirements; (2) RBOC depreciation reserves have improved substantially since the early 1980's, to the extent that virtually no deficiencies currently exist; and (3) RBOC concerns over depreciation reserve deficiencies stem from a strategy to have current telephony customers pay for RBOC entry into new and expanded services, allegedly with advanced technologies not needed to provide voice services.

As demonstrated below, MiCRA's conclusions are without merit. MiCRA's conclusions hinge on incorrect assumptions concerning the lives of telephone plant that ignore the substantial technological, regulatory and market changes that are transforming the telecommunications industry. MiCRA's conclusions are proven wrong by the results of extensive studies conducted by TFI which reflect actual technology changes experienced in the telecommunications industry from 1985 to 1995, further technology changes forecasted through 2015, and the effects of increasing competition and changing market demand on the economic lives of local exchange carrier assets during that period. TFI's studies show that the economic lives for technology-based telephone assets are significantly shorter than the lives underlying the currently prescribed depreciation rates for such plant.

In Section 2 below, TFI summarizes the results of its studies and the implications that those results have for LEC[1] depreciation requirements. TFI also discusses the relationship between LEC depreciation lives and decisions to discontinue accounting under FAS 71 for financial reporting purposes. TFI demonstrates that other telecommunications firms, such as cable TV operators, long distance providers and CAPs that are and will be competing head-to-head with telephone companies in local markets are permitted to depreciate comparable or identical plant over far shorter lives than regulators allow the LECs. Finally, in Section 3, TFI points out the fundamental errors in MiCRA's arguments and demonstrates that there is no rational basis for MiCRA's conclusions.

2. TECHNOLOGY CHANGE, COMPETITION AND DEPRECIATION LIVES

As noted, TFI has conducted extensive studies of LEC technology assets (i.e., those assets most affected by technology changes) since the mid-1980's. These studies significantly expanded then-existing technology forecasting techniques to include such advanced procedures as substitution analysis, trend analysis and computer-based modeling. The studies listed in Appendix A to this paper, present past and future technology changes and fully support TFI's conclusions regarding the need for more realistic (shorter) depreciation lives for LEC telecommunications investments.

[1] Although MiCRA addresses depreciation issues exclusively from the standpoint of the RBOCs, the serious under-recovery of depreciation expense that currently exist, and which will be aggravated if the FCC fails to change its depreciation policies, affects other LECs as well.

One recent study, Depreciation Lives for Telecommunications Equipment, updated and summarized the results of all previous TFI studies with respect to the LECs' key technologically impacted investments. Four sections of this study are presented in Appendix B to this report. The following table, taken from the report, sets forth TFI's recommendations on the lives for technologies in today's LEC networks. With the exception of Analog Switching equipment which is acknowledged by regulators to be a dying technology, these lives are appreciably shorter than the lives underlying today's FCC depreciation prescriptions for nearly all carriers. The reasons why these lives are shorter is discussed in the following sections.

Table 1
TFI EQUIPMENT LIFE RECOMMENDATIONS

Technology	Recommended Industry Average Remaining Life (1/1/95)	Corresponding Projection Life
Outside Plant		
Interoffice Cable, Metallic	2.9	
Feeder Cable, Metallic	7.0 to 7.8	
Distribution Cable, Metallic	7.5 to 10.2	
Metallic Cable, Averaged	7.0 to 8.7	14 to 16
Cable, Non-Metallic, All Types	-	15 to 20
Circuit Equipment		
Analog	2.8	6 to 9
Digital	3.7	8 to 9
Switching Equipment		
Analog	2.8	-
Digital	6.3	9 to 11

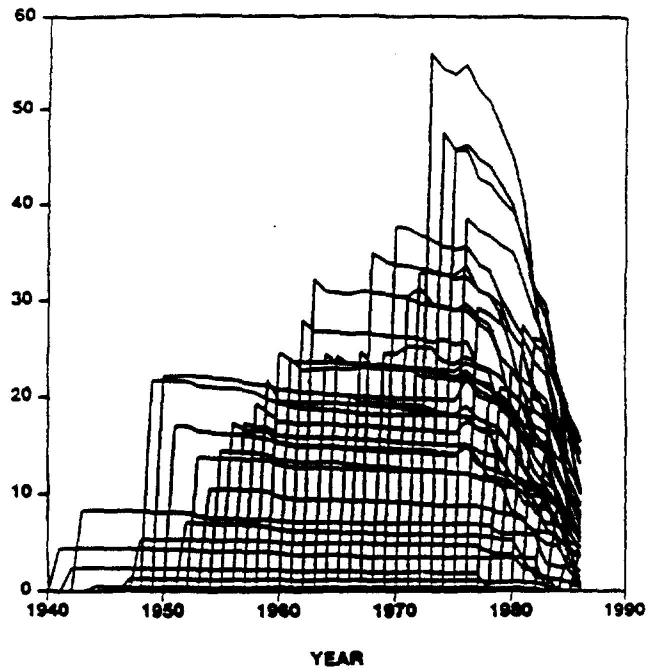
a. Avalanche Curves

The lives recommended in Table 1 reflect a phenomenon which has come to be known as the "Avalanche" curve, the effects of which are detailed in Appendix B to this report, page 8. Briefly, this curve explains the nature of many technology changes which LECs have experienced to date, and is a pattern which will be followed on most technology-based investments in the future. The "avalanche", which reflects the rapid obsolescence of such investments, occurs because technology substitutions tend to begin building smoothly but reach critical mass in just a few years. The precise date of an avalanche onset is hard to predict, especially on the basis of mortality data (i.e. accounting retirements). Further, it is difficult for periodic regulatory depreciation reviews which focus on historical data, to keep up with the rapid pace of technological change. Therefore, regulators generally will not acknowledge an avalanche until it has already begun, which is too late in the economic lives of the investments. Current regulatory methods allow a "catch-up" of the depreciation of assets only after the avalanche is already under way. This delayed catch-up becomes a "back-end load" in the LECs' depreciation expenses. While not an obvious problem in a monopoly environment, this back-end loading of LECs' operating costs becomes a severe problem in a competitive environment, including a period of transition to competition. Technology forecasting methods, on the other hand, are much more successful in predicting an avalance, since they are based on early adoption patterns of the new technology. Technology substitutions projecting the pace of adoption of the new technology are far more relevant than retirements of the old. Therefore, accounting retirements do not determine the proper economic lives or costs of the existing investments.

The avalanche effect is illustrated in Chart 1 below. Crossbar Switching technology existed in local exchange networks beginning in about 1940. Millions of dollars were invested each year in this technology, until the late 1970s, when the avalanche began to occur. During the subsequent 10 years, tremendous retirement activity took place. This resulted in serious depreciation reserve problems for companies which required huge amortizations at the very end of the investment life cycle.

Chart 1
AVALANCHE CURVE

Vintage Survivor Curves
1940-1985 Crossbar Vintages
Plant in Service (Million Dollars)



Source: Bellcore

TFI predicts, consistent with its average remaining life (ARL) projections for LEC plant contained in Table 1, that virtually the entire local exchange network will be subject to this type of avalanche. Multiple technology substitutions are even likely for some network components. For existing LEC networks, this process is already underway. All single, and some multiple technology substitutions should be completed by 2015, and possibly much sooner in light of new federal and state legislation and regulation, and the LECs' losses of customers and revenues caused by the market entry of CAP, IXC, wireless, and cable providers.

b. Discontinued Regulatory Accounting

TFI's conclusions regarding the need for shorter telephone plant depreciation lives is confirmed by the recent actions of the seven RBOCs and other price cap LECs to discontinue FAS 71 accounting for financial reporting purposes. The Financial Accounting Standards Board (FASB) issued FAS 71 to address issues related to companies accounting for the effects of regulation, by allowing regulated companies to follow regulatory accounting rules for external reporting purposes that differ from Generally Accepted Accounting Principles (GAAP). The FASB also issued FAS101 to outline criteria for discontinuance of FAS71. In the last few years, individual LECs recognized that Commission lives could no longer be utilized as realistic for external financial reporting purposes.[2]

[2] FAS101, Regulated Enterprises-Accounting for the Discontinuance of Application of FASB Statement No.71, pg. 5802-5803; Criteria to discontinue FAS71, include deregulation, changes in regulator's approach, increasing competition, and regulatory actions "that limit the enterprise's ability to sell services and products at rates that will recover costs.......".

The LECs that discontinued FAS 71 accounting generally did so to reflect changes in regulation and increasing competition in their respective serving areas.[3] Each LEC made substantial adjustments to its depreciation reserves, collectively totaling $39 billion, to reflect inadequate depreciation caused by past regulatory practices. These huge adjustments, shown in the Table 2 below, and the depreciation lives that the LECs now employ to ensure compliance with GAAP and Securities and Exchange Commission financial reporting requirements, completely refute MiCRA's arguments in this proceeding that there is no depreciation reserve problem.

[3] See, for example, Bell Atlantic News Release, August 15, 1994. "Effective August 1, 1994, Bell Atlantic has discontinued regulatory accounting under Statement of Financial Accounting Standards No. 71, "Accounting for the Effects of Certain Types of Regulation" (FAS71). After assessing its regulatory and competitive environments, the company has concluded that it no longer meets the requirements for continuation of accounting as a regulated entity. The conclusion is based on the belief that it can no longer be assured that prices can be maintained at levels that will ensure recovery of the net carrying amount of existing telephone plant and equipment, which has been depreciated over relatively long regulator-prescribed lives.

Table 2
FAS101 DEPRECIATION RESERVE ADJUSTMENTS
(Billion $)

Company	**Amount**
Ameritech	$ 3.7
Bell Atlantic	3.5
BellSouth	4.9
Rochester	0.2
GTE	7.2
NYNEX	3.6
Pacific Telesis	4.7
SWBT	4.7
SNET	1.2
US West	5.2
TOTAL	$38.9

c. Depreciation Practices of Competitors

TFI has reviewed available information on the depreciation lives prescribed or allowed by the FCC for various telecommunications companies/industry segments. These lives are presented in Table 3 below:

Table 3
<u>COMPARATIVE LIVES OF TELECOMMUNICATIONS</u>
(Lives in Years)

Plant Category	Cable TV	AT&T	LECs	TFI
Distribution Facilities	10-15 (Coax & Fiber Cable)	3.4-15(Metallic Cable)	20-30(Metallic Cable)	14-16(Metallic Cable)
Circuit Eqpt	7-14	2.5(Analog) 7.2(Digital)	8-11(Analog) 11-13(Digital)	6-9(Analog) 8-9(Digital)
Digital Switch	NA	9.7	16-18	9-11
Non-Metallic Cable (Fiber)	See Distrib. Facilities	20	25-30	15-20
Vehicles	3-7	6.6	7.5-9.5	NA
Furniture & Office Eqpt	9-11	5.6(Furniture) 9.3(Ofc Eqpt)	15-20(Furn) 10-15(Ofc Eq)	NA

1. **Cable TV Asset Lives** - This column shows the ranges of asset lives the FCC has established for use by cable providers pursuant to the Cable Act of 1992 and the FCC's Order in MM Docket No. 93-215 and CS Docket No. 94-28, released January 26, 1996.

2. **AT&T Asset Lives** - This column lists the lives ordered in CC Docket No. 95-32, AT&T's depreciation prescription as of January 1, 1994.

3. **LEC Asset Lives** - These life range are currently used by the FCC to prescribe depreciation rates for LECs under the procedures adopted in CC Docket No. 92-296.

4. **TFI Recommended Asset Lives** - These lives result from TFI's most recent studies for LEC assets as described in Table 1.

Despite the fact that the facilities of the non-LEC companies are relatively new compared to the ages of LEC assets, these non-LEC companies are depreciating their assets at much faster rates than the LECs. Even with the relatively young age of their plant, the depreciation reserves of these soon-to-be (if not already) local network competitors are often significantly higher than the LECs' regulatory reserve levels.

Table 4 compares average depreciation rates and derived remaining lives of firms in the converging industries of telecommunications, computers and entertainment.

It is easy to see from this data why existing regulated depreciation practices disadvantage LECs vis-a-vis their competitors. Cable television companies, which are rapidly deploying fiber optics and digital transmission capabilities throughout their networks, are depreciating their facilities over a remaining life of 3.6 years. IXCs/CAPs, which have almost no copper facilities and nearly all digital networks, are depreciating their assets over a remaining life of 5.7 years. In contrast, LECs are required to use remaining lives of 12 years or more for their outdated copper plant, and are depreciating their total network assets over a remaining life of 8.1 years, more than 100% longer than cable TV companies and 40% longer than the IXCs/CAPs. TFI's independent analysis confirms that the cable, IXC and CAP lives would be more realistic for the LECs' assets than the lives which the FCC currently prescribes.

Table 4

CONVERGING INDUSTRIES DEPRECIATION COMPARISON

Company	% 1995 Depr Rate	Depr Resv % (12/31/94)	Derived Remaining Life(yrs)[4]
Cable/Entertainment			
Time Warner	32.6		
Comcast	24.7		
Viacom	24.2		
Cablevision	21.2		
Walt Disney	20.2		
Jones Cable	14.8		
TCI	12.6		
Cox	11.0		
AVERAGE	**18.5**	**33**	**3.6**
High Tech Mfgrs			
Dell	18.3		
IBM	13.6		
Hewlett Packard	13.0		
Motorola	12.4		
Apple	11.7		
Compaq	11.1		
AVERAGE	**13.2**	**57**	**3.3**
IXC/CAPS			
MFS	13.0		
AT&T	9.3		
MCI	8.9		
AVERAGE	**9.3**	**47**	**5.7**
LECs			
SNET	7.9		
Sprint	7.9		
Rochester	7.8		
Bell Atlantic	7.5		
GTE	7.4		
BellSouth	7.3		
Southwestern Bell	7.2		
US West	7.2		
Ameritech	7.1		
NYNEX	7.1		
Pacific Telesis	7.0		
AVERAGE	**7.3**	**41**	**8.1**

[4] The derived Remaining Life is calculated by (100% - Depreciation Reserve %) / Depreciation Rate. The Net Salvage is assumed to be zero.

3. ERRORS IN MICRA'S ANALYSIS

There are several reasons why the MiCRA conclusions are incorrect. Simply put, MiCRA has made fundamental errors by not reflecting TFI's comprehensive studies on technology substitution, LEC discontinuance of FAS 71, and the depreciation practices of other telecommunications providers, in its analysis.

a. Use of Regulated Lives and Reserves

MiCRA's conclusions are not based on any specific analyses of changing technology, competition, new services or asset lives. Instead, MiCRA accepts the FCC's regulatory represcriptions, which are often influenced by political factors and compromise, as proper for LEC asset lives without any attempt to reflect the rapidly changing environment in which the LECs operate. The theoretical reserve calculations used by MiCRA are actually based upon the FCC's prescribed depreciation parameters. Thus, MiCRA's reasoning that their theoretical reserve calculations validate the accuracy of the FCC's prescribed lives is circular and totally wrong.

Another problem with MiCRA's study relates to its improper and confusing use of the various types of lives used by depreciation analysts in Tables 16-20. MiCRA appears to mix projection lives with average service lives, which are not synonymous. A more proper comparison would be to use the projection lives underlying the average service lives.

Also, MiCRA has limited its analysis to LEC represcriptions in the 1992-1994 time frame. In doing so, it incorrectly ignores the extensive body of evidence which has become available since that period. For instance, as noted in MiCRA's report,[4] LEC regulatory studies in 1995 resulted in a significant increase in the theoretical reserve deficiency to over $6 billion. This increase reflects only those LECs whose depreciation rates were prescribed by the FCC in 1995. Extrapolation of this deficiency to the remaining two-thirds of the companies not subject to represcription in 1995 produces a reserve deficiency for the LEC industry which proves that the $3-5 billion cited by MiCRA is drastically understated.

The LECs' most recent studies have reflected the further and significant changes occurring in the telecommunications industry, such as new MiCRA neither recognizes these implications nor adds insight that might help determine appropriate depreciation lives today.

b. Copper Distribution and Subsidies

MiCRA asserts that the acceleration of copper cable replacement will result in present subscribers being required to subsidize new technology which will be used for other than traditional telephony services. MiCRA's argument is misplaced. The telecommunications industry has experienced technology evolution since the invention of the telephone. For cable plant, these changes have included open wire evolving to copper

[4] MiCRA, Depreciation Policy in the Telecommunications Industry: Implications for Cost Recovery by the Local Exchange Carriers, Table 8.

cable, and continuing changes in the types of insulation and sheathing. Also, aerial facilities have migrated to buried, and loadings and other electrical encumberments have been substantially eliminated in local exchange cable routes. The nature of telephone service has also changed dramatically over the years. Initially, party-line service was totally acceptable to most subscribers. Today, with facsimile and data services, many homes and virtually all businesses have multiple single party lines.

As technology and services have evolved, each generation of customers has paid for the on-going cost of network improvements that have increased quality and decreased prices. The transition to fiber optics is the natural progression of a series of technology changes which have enabled the provision of less costly, improved, and enhanced telephony services. This transition is inevitable as a result of the ever-improving economics of fiber. In this transition, today's subscribers are paying for services provided, not for the early replacement of a still vibrant technology. The LECs' copper cable facilities are increasingly costly to maintain, and do not provide the capabilities and services already being demanded by today's customers. In short, economic reality and market demand, not some scheme on the part of the LECs, are driving copper cable from service. MiCRA is wrong that the LECs or any group of competitors should be forced to rely on dying copper technology.

4. CONCLUSION

Accelerating technology change and competition subject the LECs' $300 billion investment base to a substantial risk. TFI estimated in Table 1 that the ARLs of existing